
Laparoscopy for Chronic Pelvic Pain

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Chronic Pelvic Pain (CPP) is a challenging and sometimes frustrating problem for the clinician to manage. Unlike acute pelvic pain which usually has a straight forward diagnosis and treatment, CPP is more elusive and may have multiple medical, psychological, and social components. The laparoscope has proven to be a helpful tool in the evaluation of CPP. Diagnostic laparoscopy can be used to sort out the many underlying disorders contributing to CPP and operative laparoscopy can be used to successfully treat many of these disorders.

The initial evaluation of a patient with CPP should include a thorough history since this will focus the remainder of the work-up and avoid unnecessary diagnostic studies. Areas to specifically address are:

- Duration of pain
- Cyclicity (especially in relation to menses)
- Location (unilaterality or bilaterality)
- Severity and character of pain
- Any associated deep dyspareunia
- Any relation to gastrointestinal or urinary functions

A complete physical exam including a detailed pelvic exam should attempt to reproduce the pain while searching for abnormalities such as bladder tenderness, cervical motion tenderness, adnexal masses/tenderness, uterosacral ligament nodularity, fixed/poorly mobile uterus, enlarged boggy uterus, and pelvic sidewall tenderness. A rectovaginal exam should also be performed to evaluate for masses and better assess the posterior cul-de-sac.

Routinely ordering diagnostic imaging studies such as ultrasonography as part of the CPP work-up is generally not useful or cost-effective unless a specific abnormality has been found on physical exam such as a pelvic mass. Transvaginal ultrasound is usually more sensitive than transabdominal scanning in evaluating the pelvis.¹ Other studies such as barium enema, intravenous pyelogram, colonoscopy, computed tomography, or magnetic resonance imaging may be appropriate if specific clinical conditions are suspected.

The complete work-up may require a multidisciplinary approach with consultation from the gynecologist, urologist, and gastroenterologist. Since CPP can produce significant stress, depression, anxiety, and somatization, involvement of a psychiatrist, psychologist, or physical therapist may be helpful; especially in the situation where the work-up does not uncover an etiology.

As part of the gynecologist's work-up, a laparoscopy may be recommended. The goal of laparoscopy is to find and appropriately treat any underlying or contributing somatic or visceral pathology.² Compared with laparotomy, the major advantages of laparoscopy are magnification, visualization of otherwise hard-to-see spaces (diaphragmatic surfaces, cul-de-sac), minimal intraoperative trauma, low morbidity, fast recovery, and low cost.³

During the laparoscopy, it is important to follow a systematic and thorough approach. After inserting the laparoscope, a general survey of the pelvis is performed. Preoperative pelvic mapping of painful areas is essential in guiding this portion of the procedure. The organs and areas that correlate with pelvic tenderness are carefully inspected for scarring or other lesions. All surfaces of the ovaries as well as the adjacent pelvic sidewall, fallopian tubes, and broad ligaments are next inspected. Then the anterior and posterior cul-de-sacs are evaluated followed by inspection of the appendix, visible bowel, omentum, liver, and diaphragm.²

Endometriosis or adhesive disease are the most commonly found conditions in patients who undergo laparoscopy for CPP.⁴ Other conditions that may contribute to CPP include chronic pelvic inflammatory disease, pelvic congestion, ovarian cysts, fibroids, malignancies, diverticulosis, and hernias. Non-visible causes of CPP include adenomyosis, myofascial pain, and muscle spasm.

Only about 60% of women with CPP have a pathologic cause detectable by laparoscopy;⁵ therefore, there is a significant chance the laparoscopy may be negative and the patient must be properly prepared for this possible outcome. Interestingly, a negative laparoscopy in itself can sometimes be therapeutic with patients reporting improvement or resolution of their pain.

With the rapid evolution of advanced operative laparoscopy over the past two decades, many conditions causing CPP can now be surgically managed through the laparoscope. For example endometriosis or adhesions can be treated laparoscopically using a

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variety of techniques such as laser, electrosurgery, or sharp dissection. When conservative treatment fails or if adenomyosis is suspected, a hysterectomy may be decided upon and laparoscopic hysterectomy is now an alternative for select patients. Controversial denervation procedures such as laparoscopic presacral neurectomy and LUNA (Lapraoscopic Uterine Nerve Ablation) have also been tried in the treatment of CPP.

Some of the surgical procedures which have been performed laparoscopically for the treatment of CPP⁵

Ablation of endometriosis

Adhesiolysis

Appendectomy

Hysterectomy

Ovarian cystectomy

Oophorectomy

Presacral neurectomy

Resection or excision of endometriosis

Resection of persistent omphalomesenteric ligament

Salpingectomy

Uterosacral nerve resection or ablation

Uterine suspension

In the future as instrumentation becomes smaller, better, and less expensive, office diagnostic laparoscopy under local anesthesia may become more commonplace. This would be particularly useful in mapping out the painful sites since the patient is consciously sedated and able to confirm pain as various sites are touched or manipulated.¹ However, for now, laparoscopy is usually performed as an outpatient operating room procedure under general anesthesia.

Laparoscopy is not the panacea for CPP; however, when preceded by a thorough evaluation, it can be a powerful diagnostic tool which provides crucial information for subsequent management. Moreover the operative capabilities have also made this an ideal minimally invasive therapeutic tool for the surgically correctable causes of CPP.

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